



## Lead Principal Engineer

### Job description

Be part of a technology innovation excellence team that define and develop cutting-edge GaN HEMT devices and power conversion solutions from concept to market release

In your new role you will:

- Lead the analysis and data mining of GaN devices to meticulously translate the measured outcomes/behaviors to GaN HEMT specific device physics and functional properties
- Define and lead the development of new/unique automated strategies for optimum screening of discrete and power ICs based on wide band gap devices specifically GaN power devices
- Work with product line and systems engineers to provide support for yield and robustness improvement for existing and future technology generations
- Interact intensively with GaN device concept/system/product engineers to optimize device design and define requirements/ specifications to construct the high performance GaN devices and solutions
- Support the analysis of GaN based AC/DC and DC/DC soft and hard-switching characteristics
- Participate in devising new static and switching test development activities from device and application perspectives to ensure robustness of the GaN products
- Lead and support the build-up of evaluation modules and internal evaluation boards using GaN power devices
- Support the design GaN based DC/DC and AC/DC power converters
- Lead and manage the GaN government funding programs covering initiatives such as assuming the PI role, proposals write up, budget administration, quarterly reporting, and prioritizing/executing tasks as requested
- Support Infineon's CoolGaN™ project management activities as needed and demanded
- Utilize GaN particular applications-device knowledge and partake in the write up of invention disclosures as well as participate in roadmaps/technology brainstorming discussions and platform/product design review processes
- Interact intensively with GaN concept/system engineers and coach other engineers to improve device design/performance according to physical/dynamic behaviors derived from applications analysis/testing

### Profile

You are best equipped for this task if you have:

### At a glance

---

Location:

Job ID: **351073**

Start date: **Aug 08, 2022**

Entry level: **5+ years**

Type: **Full time**

Contract: **Permanent**

Apply to this position online by following the URL and entering the Job ID in our job search:

Job ID: **351073**

[www.infineon.com/jobs](http://www.infineon.com/jobs)



- PhD in Electrical Engineering or Physics
- Knowledgeable in semiconductor device physics, preferably GaN HEMT's, III-V devices, or SiC devices
- Good understanding of the interactions between device characteristics and switching behavior. Understanding of device processing/design is preferred
- Strong ability to translate and correlate applications outcomes to device properties with good understanding of the interactions between device physics and switching behaviors
- Have a decent knowledge on high-voltage packaging, and expertise on operation of high-voltage lab equipment including electronic power supplies and loads, oscilloscopes, or function generators
- Work with ease and independently in Synopsys simulation suites and Cadence environment for layout design along with proficiency in electrical testing of GaN power switches and DOE definition/analysis using JMP
- Experience in developing Si MOSFET, IGBT, SiC, or GaN power stages with basic knowledge in the design and implementation of power converters topologies and control methods in power supplies, chargers and/or motor drives
- Ability to work/communicate effectively with team members located world-wide. Have strong technical analytical/problem solving background, with the ability to produce high quality technical documentation
- Demonstrated strong analytical and problem solving skills
- Enjoy working in a team setting and a team player
- Well organized and able to plan, execute tasks, and achieve results
- Proactive, take ownership and detail-oriented
- Strong knowledge of DOE (Design of Experiments) and data analysis using statistical tools
- Ability to bench test (using different sets of laboratory test equipment) GaN fabricated devices as per the DOE to collect, summarize and present electrical data

## Why Us

### Part of your life. Part of tomorrow.

Infineon is a world leader in semiconductor solutions that make life easier, safer, and greener. Our solutions for efficient energy management, smart mobility, and secure, seamless communications link the real and the digital world.

*Infineon Technologies Americas Corp. is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex (including pregnancy, childbirth, or related medical conditions), gender identity, national origin, ancestry, citizenship, age, physical or mental disability, legally protected medical condition, family care status, military or veteran status, marital status, domestic partner status, sexual orientation, or any other basis protected by local, state, or federal laws. Applicants with questions about access or requiring a reasonable accommodation for any part of the application or hiring process should contact the Talent Network by phone at (408) 503-2194.*

Employment at Infineon is contingent upon proof of your legal right to work in the United States under applicable law, verification of satisfactory references and successful completion of a background check and drug test, and signing all your onboarding documents .

In some instances, if applicable, U.S. export control laws require that Infineon obtain a U.S. government export license prior to releasing technologies to certain persons. This offer is contingent upon Infineon's ability to satisfy these export control laws as related to your employment and anticipated job activities. The decision whether or not to submit and/or pursue an export license to satisfy this contingency, if applicable, shall be at Infineon's sole discretion.



**IMPORTANT NOTICE:**

Infiniteon is requiring all new U.S. employees and contractors to be fully vaccinated against COVID-19. Full vaccination is defined as two weeks after both doses of a two-dose vaccine or two weeks since a single-dose vaccine has been administered. Anyone unable to be vaccinated, either because of a sincerely held religious belief or a medical condition or disability that prevents them from being vaccinated, can request a reasonable accommodation.

Infiniteon Technologies takes data privacy and identity theft very seriously. As such, we do not request personally-identifiable information (PII) from applicants over the internet or electronically. Please kindly refrain from disclosing your PII electronically during the application process or to unauthorized websites that may purport to be Infiniteon or any of our affiliates.

